

**COMMISSION ON TEACHER CREDENTIALING**

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**OFFICE OF THE EXECUTIVE DIRECTOR**

DATE: April 14, 2003 #03-0010

TO: All Individuals and Groups Interested in the Activities of the Commission on Teacher Credentialing

FROM: Dr. Sam W. Swofford  
Executive Director

SUBJECT: Addition of Single Subject Teaching Credentials in Foundational-Level Mathematics and in Science (Specialized)

The California Commission on Teacher Credentialing (the Commission) is offering additional subject areas for the Single Subject Teaching Credential. They are Foundational-Level Mathematics and four new areas in science: Biological Sciences (Specialized), Chemistry (Specialized), Physics (Specialized), and Geosciences (Specialized). Single Subject Teaching Credentials in Mathematics and in Science continue to be available. Presently there are sixteen single subject teaching areas. With the addition of these single subject teaching areas, the number of teachers with authorizations in mathematics and science is likely to increase significantly.

**Single Subject Teaching Credential in Foundational-Level Mathematics****Authorization**

The Single Subject Teaching Credential in Foundational-Level Mathematics authorizes the holder to teach the content areas taught to the vast majority of California's K-12 public school math students: general mathematics, algebra, geometry, probability and statistics, and consumer mathematics. Instruction is permitted in grades twelve and below, including preschool, and in classes organized primarily for adults. The teaching of Advanced Placement (AP) courses is not authorized by this credential.

**Subject Matter Requirement**

The subject matter requirement for a credential in Foundational-Level Mathematics can be satisfied by either passing the appropriate subject-matter examinations or by completing a Commission-approved subject-matter preparation program. These two options are described below.

**California Subject Examinations for Teachers (CSET).** The CSET is the new set of examinations used by the Commission to verify subject matter knowledge and will, over the next four years, replace the SSAT and Praxis II subject matter examinations. The CSET is administered by National Evaluation Systems, Inc. (NES). Individuals who choose to satisfy the subject matter requirement by the examination option must obtain

passing scores on the first two subtests of the CSET: Mathematics. These subtests include: Subtest I: Algebra; Number Theory (test code 110) and Subtest II: Geometry; Probability and Statistics (test code 111). These examinations are currently available. For more information on the CSET, go to [www.cset.nesinc.com](http://www.cset.nesinc.com). This Web site provides the subject matter requirements, test dates, test guides, registration bulletin, answers to frequently asked questions, policies on calculator use, and internet registration. It is anticipated that minimum passing scores for these subtests will be determined in mid-April of this year. When available, the passing standards will be posted on both the Commission's Web site at [www.ctc.ca.gov](http://www.ctc.ca.gov) and the CSET Web site, [www.cset.nesinc.com](http://www.cset.nesinc.com).

**Subject Matter Preparation Program.** New Standards of Quality and Effectiveness for Subject Matter Programs in Mathematics have recently been adopted by the Commission and are now available on the Commission's Web site. Institutions of higher education wishing to offer a program of subject matter preparation in foundational-level mathematics will need to submit proposals to the Commission for review and approval. Additional information related to document submission and implementation timelines will be provided in a separate communication. Institutions with approved subject-matter programs, will be responsible for evaluating and guiding candidates who are seeking the Single Subject Teaching Credential in Foundational-Level Mathematics.

### **Single Subject Teaching Credential in Science (Specialized)**

#### **Authorization**

The Single Subject Teaching Credential in Science (Specialized) authorizes instruction in the specific science area listed on the credential (Biological Sciences, Chemistry, Geosciences, or Physics) in California public schools, grades twelve and below, including preschool, and in classes organized primarily for adult learners. This credential does not, however, permit instruction of general, introductory, or integrated science.

#### **Subject Matter Requirement**

The subject matter requirement for a Single Subject Teaching Credential in Science (Specialized) can be satisfied by one of three ways. The first way is by passage of the appropriate subject matter examinations in the specialized area of science: Biological Sciences, Chemistry, Earth and Planetary Science (Geoscience), or Physics. The other ways are through a program of academic preparation. More information on each way to satisfy the subject matter requirement follows.

**California Subject Examinations for Teachers (CSET).** The CSET is the new set of examinations used by the Commission to verify subject matter knowledge and will, over the next four years, replace the SSAT and Praxis II subject matter examinations. The CSET is administered by National Evaluation Systems, Inc. (NES). Individuals who choose to satisfy the subject matter requirement by the examination option must obtain

passing scores on two subtests of the CSET: Science. The first subtest is Subtest III in the specialized area: Biology/Life Science (test code 120), Chemistry (test code 121), Earth and Planetary Science (test code 122)<sup>1</sup>, or Physics (test code 123). These subtests are now available. It is anticipated that minimum passing scores for these subtests will be determined in mid-April of this year. When available, the passing standards will be posted on both the Commission's Web site at [www.ctc.ca.gov](http://www.ctc.ca.gov) and the CSET Web site, [www.cset.nesinc.com](http://www.cset.nesinc.com).

The second subtest candidates will need to pass if verifying subject matter knowledge through the examination option is Subtest IV of the CSET: Science. Subtest IV will also be taken in one of the four specialized areas. This subtest is not currently available. We expect that it will be administered for the first time in Fall of 2003. The official CSET Web site, which includes test guides, internet registration, and, as available, more information on the CSET: Science Subtest IV, can be found at [www.cset.nesinc.com](http://www.cset.nesinc.com).

**Subject Matter Preparation by Coursework.** The subject-matter requirement for the Single Subject Teaching Credential in Science (Specialized) may be satisfied through coursework as shown in either option 1 or 2 as outlined below. Since these options are not Commission-approved subject-matter programs, the college or university where the candidate is completing his or her teacher preparation program will need to ascertain whether a candidate's course work meets the subject-matter requirement for the credential by either:

- determining whether the candidate has completed a degree and/or coursework in a specialized subject or one of the closely related subject areas listed below; or
- if the candidate has completed a degree and/or course work in a subject area not listed as "closely related", the Commission may review the candidate's course work to determine whether he or she has satisfied the subject-matter requirement. In fairness to the candidate, the sooner this determination is made the better it will be for both the candidate and the college or university. Either the candidate or the college or university may submit a complete set of official transcripts to the Commission. Please mark the envelope: Attention: Specialized Science Review. The candidate, working with his or her teacher preparation institution, will need to determine when the Commission should complete this review.

The two subject-matter coursework options are:

- 1) Completion of a post-baccalaureate degree from a regionally-accredited institution in the requested area, or in a closely related area deemed equivalent by the Commission;

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<sup>1</sup> Subtest III: Earth and Planetary Science is used for an authorization in Geosciences.

- 2) Completion of a baccalaureate degree and 30 semester-units or 45 quarter-units of postgraduate coursework in the science area requested, or in a closely related area deemed equivalent by the Commission. The degree and postgraduate coursework must be from a regionally-accredited institution, and each course applicable to the science area requested shall have a grade of "B" or better, "pass," or "credit."

**Closely related subject deemed equivalent by the Commission include:**

Biological Sciences (Specialized): Life Sciences, Anatomy, Botany, Genetics, Physiology, Zoology, Microbiology, Biochemistry/Molecular Biology, Biotechnology, Marine Biology, Ecology, Environmental Science.

Chemistry (Specialized): Inorganic Chemistry, Physical Chemistry, Organic Chemistry, Biochemistry, Quantitative Analysis/Qualitative Analysis, Nuclear Chemistry, Physical Science-Chemistry.

Geosciences (Specialized): Earth Sciences, Astronomy, Cosmology, Geology, Meteorology, Paleontology, Oceanography, Hydrology, Physical-Geoscience, Atmospheric, Climatology, Conservation, Geophysics, Marine Science, Mineralogy, Soil Science.

Physics (Specialized): Quantum Mechanics, Electrical Magnetic Physics, Optical Physics, Atomic and Nuclear Physics, Thermodynamics, Mechanical (heat and energy) Physics.

**Additional Certification Requirements**

Individuals seeking initial certification in Foundational-Level Mathematics or Science (Specialized) must also complete all other requirements for the Single Subject Teaching Credential, including completion of a baccalaureate degree, completion of an appropriate teacher preparation program, passage of the California Basic Educational Skills Test (CBEST), and personal and professional fitness verification. Individuals who already hold appropriate teaching credentials and wish to add one of the new authorizations should review the credential requirements on the applicable leaflet: *Adding an Authorization (CL-621a)* or *Adding Authorizations to a Pre-Ryan Credential (CL-621)*. These leaflets are available on the Commission's Web site at [www.ctc.ca.gov/credentialinfo/credinfo.html](http://www.ctc.ca.gov/credentialinfo/credinfo.html).

California-trained candidates for Single Subject Teaching Credentials in Foundational-Level Mathematics or Science (Specialized) must receive the recommendation of a California college or university with a Commission-approved Single Subject Teaching Credential program. Out-of-state trained candidates may apply directly to the Commission by submitting an application, appropriate fees, verification of examination scores, if applicable, and official transcripts.

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The Single Subject Teaching Credentials in Foundational-Level Mathematics or Science (Specialized) may be used as a prerequisite credential to qualify for an Administrative Services Credential, Reading Specialist Credential, or other credentials that require an individual to hold a credential based on a teacher preparation program and student teaching. In addition, it may be used as the prerequisite credential to obtain an added authorization for Multiple or Single Subject instruction.

**Questions**

If you have further questions concerning these additional authorizations, please contact the Information Services Unit at the Commission at (916) 445-7256 or toll-free at (888) 921-2682 between 8 a.m. and 5 p.m., weekdays, or by e-mail at [credentials@ctc.ca.gov](mailto:credentials@ctc.ca.gov).